epiTRENDS

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DOH Injury Prevention Project Increased Use of Bike Helmets by Children from Low-Income Families

Bicycle crashes are the leading cause of head injury among Washington children age 5 to 14 years.[1] Although bicycle helmets reduce bicycle-related head injuries by 85%,[2] helmet use rates remain below 50%. Data suggest that children of lower income neighborhoods are at greater risk of injury, probably due to lower rates of helmet use (about 20%), limited areas for safe riding, and greater exposure to motor vehicle traffic in high-density urban settings.

With these facts in mind, the Department of Health's Injury Prevention Program developed a project to increase bicycle helmet ownership and use among children participating in Head Start and the Early Childhood Education and Assistance Program (ECEAP), and among their siblings aged 5–14. Each program site participating in the project did the following:

- Purchased helmets for each tricycle, bicycle, or "big wheel" toy available for children to ride on site, and required the children to wear them when riding.
- Educated parents about the risks of head injury from bicycle crashes, the effectiveness of helmets, strategies to encourage helmet use, and the importance of establishing the helmet-wearing habit while their children were still young. The state program provided a customized curriculum and statewide staff training.
- Ordered helmets for each child and fit them by trained staff.
- Conducted classroom education on the importance of wearing helmets.
- Conducted bicycle rodeos that allowed the preschool children to practice safe riding skills and to see other children wearing helmets. Parents learned how to fit helmets and discussed strategies to encourage continued helmet use.

The following results represent evaluation efforts conducted during the last two years of the three-year project, which involved participation by 13,378 preschool children from low-income families. The Harborview Injury Prevention and Research Center evaluated the project.

Routine home visits conducted by Head Start/ECEAP staff permitted observation of bicycle helmet use. Baseline observations occurred early in the school year prior to any helmet promotion activities. Evaluation efforts were repeated during follow-up home visits two to three weeks after the

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Collaborative Project Focuses on Quality of Care in Diabetes Management

Health care organizations, insurers, and employers have a strong interest in promoting early detection and appropriate management of diabetes, a complex disorder of glucose metabolism that affects more than 160,000 Washington residents.

In adults, diabetes is the leading cause of blindness, nontraumatic lower extremity amputations, and end-stage kidney disease, and it greatly increases the risk of death by heart attack or stroke. It is also a major cause of birth defects among infants of women with diabetes. Early detection and appropriate management of diabetes and its complications can greatly decrease hospitalizations and overall health care costs associated with diabetes, which exceeded $2 billion in Washington State according to 1992 estimates.

In one of the largest efforts nationwide to evaluate the quality of health care

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Diabetes Measures *(from page 1)*

provided to persons with diabetes, government and private groups in Washington are collaborating on the Diabetes Outcomes Measurement Project. Its goals are to:

- determine the feasibility of implementing a set of standardized measures to evaluate care for diabetes provided by numerous health plans and systems of care;
- provide health plans, public officials, and others with information they can use to improve care for persons who have diabetes;
- generate purchaser support of a standardized measurement system;
- develop a format for presenting this type of information to consumers and purchasers.

The Diabetes Outcomes Measurement Task Force (Table 1), established by DOH in 1996, directs the project in collaboration with other government and private agencies and health care purchasers. The Task Force will focus on the areas for measurement of quality of care listed in Table 2:

During summer 1998, PRO-West, a peer review organization hired by DOH, will survey patients by mail and will analyze health plan administrative data and medical records to determine the availability of information on these measures and the cost and practicality of collecting such information. For each participating plan, at least 250 randomly selected enrollees with diabetes will participate in the survey. The Task Force will use the results as a baseline for developing the quality measures. After the findings are compiled, each participating health plan will receive its own data. Health plans have agreed not to release the data to the public or to use the data for marketing purposes. A plan may, however, release its data to certain health care purchasers with which it contracts.

For additional information about this project, please contact Jan Norman, DOH Diabetes Control Program, at 360-236-3686 or by e-mail at jen0303@doh.wa.gov ◆

TABLE 1: Participants in Diabetes Oucomes Measurement Task Force, Washington State, 1996–1998 (as of May 1998).

Private Health Plans

Aetna U.S. Healthcare
Community Health Plans of Washington
First Choice Health
Group Health Cooperative of Puget Sound
Group Health Northwest
Kaiser Foundation Health Plan of the Northwest
NYLCare
PacifiCare of Washington
PREMERA
Providence Health Plans
QualMed Washington Health Plan
Regence BlueShield
Skagit County Medical Bureau
United HealthCare of Washington
Virginia Mason Health Plan
Whatcom County Medical Bureau

Special Population Plans

Choice Regional Health Network
Indian Health Service
Madigan Army Medical Center
Medicare
Veteran's Administration Puget Sound Health Care System

State Agencies

Medical Assistance Administration
Washington State Health Care Authority
Washington State Department of Health

Contractor

PRO-West

TABLE 2: Areas for measurement of quality of care to be evaluated by the Diabetes Outcomes Measurement Project

Health care provider visit
Dilated eye exam
Foot exam
Blood pressure measurement
Microalbuminuria screen
Glycosylated hemoglobin test
Lipid profile
Diabetes education
Daily use of aspirin
Assessment of coping with disease
Assessment of maintaining daily activities
Assessment of smoking status and cessation counseling

Bicycle Helmets *(from page 1)*

helmets were distributed to the children.

To help measure the effectiveness of the project, a group of control sites was identified in the 1996–97 school year from among Head Start and ECEAP sites that decided not to conduct helmet promotion activities. Helmet use among children at the control sites was assessed with the same protocol employed for the intervention sites.

The home visitor would request permission of parents to ask the preschool child to ride briefly. The visitor recorded helmet use, riding location, vehicle type (tricycle or bicycle), and whether helmet use was preceded by verbal prompting. If the child did not spontaneously put on a helmet, the

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Monthly Surveillance Data by County

April 1998* – Washington State Department of Health

County	E. coli O157:H7	Salmonella	Shigella	Hepatitis A	Hepatitis B	Non-A, Non-B Hepatitis	Meningococcal Disease	Pertussis	Tuberculosis	Chlamydia	Gonorrhea	AIDS	Pesticides†	Lead§#
Adams	0	0	0	1	0	0	0	0	0	2	0	0	1	0/0
Asotin	0	0	0	0	0	0	0	0	0	6	0	0	0	0/0
Benton	0	1	0	1	1	0	0	0	0	25	0	0	3	1/24
Chelan	0	1	0	0	0	0	0	0	1	17	0	0	2	6/33
Clallam	0	0	0	0	0	0	0	0	0	8	0	0	0	0/0
Clark	1	2	0	3	1	0	2	0	2	57	6	1	0	0/0
Columbia	0	0	0	0	0	0	0	0	0	0	0	0	0	0/0
Cowlitz	0	0	0	0	2	0	0	0	0	18	1	0	0	0/14
Douglas	0	1	0	0	0	0	0	0	0	5	0	0	1	0/0
Ferry	0	0	0	0	0	0	0	0	0	0	0	0	0	0/0
Franklin	0	1	0	0	0	0	0	0	1	8	1	2	0	2/8
Garfield	0	0	0	0	0	0	1	0	0	0	0	0	1	0/0
Grant	0	0	0	1	0	0	0	0	0	18	0	0	3	0/5
Grays Harbor	0	1	0	0	0	0	0	0	0	15	0	0	1	0/#
Island	0	0	0	0	1	0	0	0	0	17	2	0	1	0/5
Jefferson	0	0	0	0	0	0	0	0	0	4	0	1	0	0/0
King	2	6	17	58	3	1	0	2	6	302	98	9	5	1/23
Kitsap	0	1	0	1	1	0	0	0	0	48	2	1	0	2/27
Kittitas	0	1	0	0	0	0	0	0	0	5	0	0	0	0/0
Klickitat	0	0	0	0	0	0	0	0	0	4	0	0	0	0/0
Lewis	0	0	0	0	0	0	0	0	0	7	0	0	0	0/#
Lincoln	0	0	0	0	0	0	0	0	0	0	0	0	0	0/0
Mason	0	0	0	0	0	0	0	0	0	9	0	2	0	0/0
Okanogan	0	1	0	1	0	0	0	0	0	6	0	1	2	0/0
Pacific	0	0	0	0	0	0	0	0	0	2	0	0	0	0/0
Pend Oreille	0	0	0	0	0	0	0	0	0	0	0	0	0	0/0
Pierce	0	6	1	8	1	0	0	5	4	176	38	0	1	1/115
San Juan	0	0	0	0	0	0	0	0	0	3	1	0	0	0/0
Skagit	0	1	0	9	0	0	0	0	0	8	2	0	0	0/#
Skamania	0	0	0	0	0	0	0	0	0	0	0	0	0	0/0
Snohomish	0	5	0	9	0	1	0	6	2	100	13	4	2	0/8
Spokane	1	4	0	87	1	0	0	0	1	54	7	0	2	0/23
Stevens	0	0	0	0	0	0	0	0	0	0	0	0	0	0/0
Thurston	0	2	0	2	0	0	0	4	0	53	1	0	0	0/10
Wahkiakum	0	0	0	0	0	0	0	0	0	1	0	0	0	0/0
Walla Walla	0	2	1	0	1	0	0	0	1	10	0	0	2	0/#
Whatcom	0	0	2	2	0	0	0	0	1	54	1	0	0	1/#
Whitman	0	0	0	1	0	0	0	0	0	6	0	0	1	0/0
Yakima	0	0	6	4	0	1	0	5	1	62	2	2	4	1/14
Unknown													2	0/2
Current Month	4	36	27	188	12	3	3	22	20	1110	175	23	33	15/322
April 1997	1	48	13	57	5	3	17	54	35	880	166	63	28	7/408
1998 to date	14	97	37	336	31	8	26	86	66	3627	613	149	71	45/1243
1997 to date	9	140	43	195	19	9	43	129	103	3165	704	258	57	45/1445

* Data are provisional based on reports received as of April 30, unless otherwise noted.
† Unconfirmed reports of illness associated with pesticide exposure.
§# Number of elevated tests (data include unconfirmed reports) / total tests performed (not number of children tested); number of tests per county indicates county of health care provider, not county of residence for children tested; # means fewer than 5 tests performed, number omitted for confidentiality reasons.

WWW Access Tips

The Harborview Injury Prevention Center posts information and education materials at: http://weber.u.washington.edu/~hiprc/

The Diabetes Division of the Centers for Disease Control and Prevention posts national and state data at: http://www.cdc.gov/nccdphp/ddt/ddthome.htm

Questions? Comments?
If you have a question about epidemiologic or public health issues, contact the editors at the address on the mailing panel or by email at function@u.washington.edu

Bicycle Helmets *(from page 1)*

home visitor waited for a count of five to see whether the parent would prompt the child. If not, the home visitor prompted the child by asking: "Don't you have a helmet to wear when you ride?"

Results showed that helmet use more than doubled among children in the intervention group, from 43% to 89%. Although helmet use also increased in the control group (from 42% to 60%), the increase was significantly greater for the intervention group ($x^2 = 18.8$, $p < .001$). In addition, unprompted use of helmets increased by approximately three-fold from 18% to 53%.

Long-term helmet use could not be determined because the project lacked the resources to track the children once they left the Head Start and ECEAP programs. As with any health education program, sustaining a message is important to sustaining changes in behavior. However, the willingness of so many children to wear their helmets without prompting from nearby adults suggests that, when introduced to the concept, young children from low-income families are receptive and amenable to wearing bicycle helmets. Similar study methods may be useful to evaluate helmet promotion programs where "street corner" observations are not feasible.

For more information about the Children's Bicycle Helmet Project, contact Ilene Silver, DOH project coordinator, at (360) 236-3602.

References

1. LeMier M, Keck D: *Head and Spinal Cord Injuries in Washington State*. Olympia: Washington State Department of Health. April, 1994.
2. Thompson RS, Rivara FP, Thompson DC: A case-control study of the effectiveness of bicycle safety helmets. *N Engl J Med* 1990; 320:1361-1367.

Correction to April Issue

Page 2, Table 2 (Core Conditions), add:
Meningococcal disease

Page 2, Table 3 (Rare/Unusual Conditions), add:
Tularemia
Typhoid

DOH Releases Report on Statewide Cancer Data for 1995

The *1995 Annual Report of the Washington State Cancer Registry* is now available. This resource provides information on the 24 most frequently diagnosed types of cancer in Washington; it focuses on cases newly diagnosed in 1995. The report is the second in a series of planned annual reports.

The 1995 data include incidence and mortality, stage at diagnosis, age- and gender-specific incidence, and regional incidence and mortality. The sections on annual trends and on county-specific incidence and mortality include additional data from previous years.

The report should be useful for assessing community wellness and program planning. For a copy of this report and the 1994 Annual Report, contact Carolyn Comeau at (360) 664-8776, or visit the DOH web site at http://www.doh.wa.gov; select "Health Statistics" under "Topics."

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Bruce Miyahara, MHA
Secretary

Jeanette K. Stehr-Green, MD
Acting State Health Officer

Paul Stehr-Green, DrPH, MPH
State Epidemiologist

Sandra L. Marvinney, BA
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Marcia J. Goldoft, MD, MPH
Scientific Editor

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Washington State Department of Health
*epi*TRENDS
P.O. Box 47812
Olympia, WA 98504-7812